

### **REMARKS**

Claims 1, 2, 4, 5, 8-13, 16-18, 20, 21, 24-34 and 36-48 are currently pending in the subject application and are presently under consideration. Claims 15, 9, 12, 13, 16, 17, 21, 24-33, 36, 40, 44-47 have been amended as shown on pages 2-8 of the Reply. Claims 3, 6, 7, 14, 15, 19, 22, 23 and 35 are cancelled.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

#### **I. Objection of Claims 13, 29 and 45 Under 37 CFR 1.75(c)**

Claims 13, 29 and 45 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. In view of the amendments to claims 13, 29 and 45 this rejection is now moot and should be withdrawn.

#### **II. Rejection of Claims 1-48 Under 35 U.S.C. §101**

Claims 1-48 stand rejected under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter. Withdrawal of this rejection is respectfully requested for at least the following reasons. Independent claims 1, 17, and 33 have been amended herein to clearly illustrate that elements within such claims are associated with a computer. In particular, claim 1 as amended is directed towards a *computer-implemented system* that renders a human machine interface (HMI), wherein such a system performs a function (*e.g.*, renders a HMI). Accordingly, this claim includes functional descriptive material within a computer, thereby rendering it structurally and functionally interrelated to the computer and is therefore directed to statutory subject matter (*See In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994)). Claims 17 and 33 have been similarly amended. Furthermore, it is readily apparent that these claims produce a useful, tangible, and concrete result.

Because the claimed process [method] applies the Boolean principle to produce a useful, concrete, tangible result ... on its face the claimed process comfortably falls within the scope of §101. *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1358. (Fed.Cir. 1999); *See State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1373, 47 USPQ2d 1596, 1601 (Fed.Cir.1998) (finding a system implementing a

financial management structure satisfied §101 because it constituted a practical application of a mathematical algorithm by producing a useful, concrete and tangible result).

HMI is an application that facilitates creation of custom screens for displaying information and/or controlling an industrial environment, and further provides graphical objects that represent component(s), conditions, equipment, states, etc. which exist in an industrial automation environment (*See e.g.* page 1 lines 26-29). Independent claim 1 recites components executable by a computer system, (a processing component and a rendering component) that analyze information relating to a current state of parameters and automatically configure the HMI utilizing the information relating to the determined protocol. Thus, claim 1 recites independent acts (analyzing and outputting) that are performed on non-abstract entities (equipment within industrial automation environment) to produce useful, concrete, and tangible results - a Human Machine Interface (HMI). The specification provides several examples of practical applications along with satisfactory explanations illustrating the usefulness of the claimed system; - such as; "...in an industrial setting, a plant operator can control *starting and/or stopping of a pump utilizing a HMI via* depressing a key on a keyboard." (*See* page 2 lines 1- 10), "...the SEC 110 can incorporate a type of equipment being monitored as a parameter for determining a most proper HMI-rendering protocol... An appropriate HMI is rendered dependent upon the type of equipment being monitored to provide users with meaningful graphical objects and useful controls." (*See* page 8 lines 25-29).

The subject invention enhances the process of rendering a HMI by taking into consideration various parameters such as - type of equipment, zone of operation or a user to name a few. One advantage with the claimed system is that in employing a combination of the processing and rendering components the subject invention can mitigate high costs associated with reprogramming that may be necessary to render a proper HMI upon alteration of any parameter. For example, various hardware components possess divergent inherent characteristics (*e.g.*, memory limitations, RAM, screen resolution, processor capabilities, operating systems, screen size, peripherals, video capabilities, ...); thus, appropriately formatted data must be provided to the hardware components to render useful and meaningful HMIs. Therefore, the type of equipment employed (*See e.g.* claims 13, 29, and 45) is evaluated by the claimed system in determining an appropriate protocol for HMI configuration. The system of claim 33 is also employable to produce the above exemplary results. With regards to method claim 17, such claim is limited to a practical application, as it provides a

useful, concrete, and tangible result. In particular, the method *processes information relating to current state of parameters... and rendering a human machine interface automatically in accordance with the inferred HMI rendering protocol*. Accordingly, this claim produces at least the aforementioned useful, concrete, and tangible results associated with the system claims (e.g., claims 1 and 33).

In view of at least the above, it is readily apparent that the claimed invention produces a useful, concrete, tangible result (e.g., meaningful HMIs on computer systems) pursuant to *AT&T Corp. v. Excel Communications, Inc.* Accordingly, this rejection should be withdrawn.

### **III. Rejection of Claims 1-48 Under 35 U.S.C. §102(e)**

Claims 1-48 stand rejected under 35 U.S.C. §102(e) as being anticipated by Drucker, *et al.* (U.S. 2004/0215657). It is requested that this rejection be withdrawn for at least the following reasons. Drucker, *et al.* does not teach or suggest each and every aspect of the claimed invention.

For a prior art reference to anticipate, 35 U.S.C. §102 requires that “*each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.*” *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950 (Fed. Cir. 1999) (*quoting Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)). (emphasis added)

The claimed invention relates to a system and methods to facilitate automatic configuration of a HMI based upon a variety of parameters associated with an industrial automation environment. In particular, amended independent claims 1, 17, and 33 recite similar features, namely *the predefined protocol being determined at least in part upon a zone of operation*. Drucker, *et al.* is silent with regard to such novel aspects.

Drucker, *et al.* teaches a user interface that facilitates accessing and browsing focal objects and related objects based upon a set of criteria of the focal object. The user begins by entering data regarding the first object. A relationship component browses and accesses the first object from the database while a display component centrally displays the first object. Metadata associated with the focal object is used to access and display clusters of objects that share

metadata, along different axes surrounding the focal object. The user is allowed to browse through the cluster of objects and select one of them as a new focus object. Then the relationship component accesses another set of peripheral clusters to be displayed which share metadata with the new focus object.

At page 6 of the Office Action, the Examiner asserts that Drucker, *et al.* teaches *the predefined protocol being determined at least in part upon a zone of operation*. Applicants' representative respectfully disagrees. At the indicated portions, the reference teaches explicitly trained classifiers that automatically annotate, file, group, cluster and merge media items in accordance with user preferences. The cited reference does not teach or suggest rendering a HMI based upon a zone of operation. The subject invention, by rendering a location based HMI, provides relevant information to a user who is within a given zone and thus, is in proximity to the physical object represented by the HMI (*See for e.g.* applicants' fig. 2 and page 11 lines 19-29). Hence it can be concluded that the Drucker, *et al.* does not teach or suggest *the predefined protocol being determined at least in part upon a zone of operation* as recited in the subject claims. Accordingly this rejection should be withdrawn with respect to independent claims 1, 17, 33 and all the claims that respectively depend there from.

**CONCLUSION**

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [ALBRP311US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicant's undersigned representative at the telephone number below.

Respectfully submitted,

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